

REMARKS

Claims 1-9 and 11-54 are pending in this application. Claims 1-9 and 11-20 have been elected for prosecution on the merits, of which claims 1, 4, 5, and 6 are independent. Claim 10 has been cancelled.

Applicants incorporate herein the remarks in the Reply filed June 17, 2003. The present Amendment responds to additional comments presented in an Advisory Action issued in response to the June 17 Reply.

Rejection under 35 U.S.C. §103 - Nishino and Hirano

Claims 1-3 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Nishino et al. (JP 407072311A) in view of Hirano et al. (U.S. Patent 5,976,175). Applicants respectfully traverse this rejection.

The final Office Action alleges that Nishino teaches a semiconductor laser device including a semiconductor laser chip 7 covered with a resin 1a (Figure 5). The Office Action admits that Nishino does not necessarily teach the resin having a light diffusion capability. Instead the Office Action relies on Hirano for teaching a molded resin having a light diffusion capability (column 3, line 61). Further, the Office Action alleges that Hirano teaches other types of laser devices "for the specific

purpose of providing safety precautions for laser light in applications to the human body" (Hirano: column 1, line 60, to column 2, line 2, and column 3, lines 55-65).

Further, an Advisory Action presents an argument that Nishino's plane-convex lens 1a covers semiconductor laser chip 7 within the dictionary definition of "cover," i.e., placed above or about the clip. Applicants disagree that the semiconductor laser chip 7 is covered by plane-convex lens 1a having a light diffusion capability.

In any case, for the sake of furthering prosecution of the application, Applicants have amended claim 1 to replace the word "cover" with "encapsulated within." Applicants submit that the amendment has support with respect to the embodiment shown in Figure 1 (see Specification, page 37, first full paragraph). Applicants submit that unlike Nishino, the present semiconductor laser device includes a semiconductor laser chip encapsulated within the resin.

The Advisory Action presents an argument that "because Nishino et al. is concerned with detect ability of targets at some distance by the laser radar system preferably as early, i.e., as distant as possible, a strong, reasonably focused beam over a large distance is an obvious objective of the field of application of Nishino et

al." and "Some minimum amount of diffusion of the laser light as taught by Hirano should be considered an obvious safety requirement for the use of said laser radar system."

Applicants assume, for the sake of argument, that the comments concerning "obvious objective" of Nishino and "obvious safety requirement" of Hirano imply inherent teachings of those references, as the comments are not obtained from explicit statements in either of those references.

Applicants disagree that Hirano implies an inherent teaching of resin having a light diffusion capability. In any case, in order to further define what is meant by resin having a light diffusion capability, Applicants have amended claim 1 to recite "wherein the resin comprises two or more materials of different refractive indexes." Applicants submit that Hirano and Nishino, either alone or in combination, fail to teach or suggest at least this claimed limitation.

Accordingly, Applicants respectfully request that the rejection be withdrawn.

Rejection under 35 U.S.C. §103 - Nishino, Hirano, and Claisse

Claims 4 and 7 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Nishino, Hirano, and Claisse et al.

(*Electronics Letters*, Vol. 28, No. 21). Applicants respectfully traverse this rejection.

Claim 4 is directed to the invention of claim 1 with the added limitation of a plurality of light emitting portions. Applicants have found that by having a plurality of light emitting portions the resistance of the element is reduced, resulting in a further improvement in the reliability of the semiconductor laser device (Specification, page 22, lines 12-18).

Similar to claim 1, claim 4 has been amended to recite "a semiconductor laser chip encapsulated within resin." As stated above, Applicants submit that Nishino fails to teach or suggest a semiconductor laser chip encapsulated within resin. At least for this reason Applicants submit that the rejection fails to establish *prima facie* obviousness.

Accordingly, Applicants respectfully request that the rejection be withdrawn.

Rejection under 35 U.S.C. §103 - Nishino, Hirano, and Hirayama

Claims 5 and 8 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Nishino, Hirano, and Hirayama et al. (U.S. Patent 5,970,081). Applicants respectfully traverse this rejection.

Similar to claim 1, claim 5 has been amended to recite "a semiconductor laser chip encapsulated within resin." As stated above, Applicants submit that Nishino fails to teach or suggest a semiconductor laser chip encapsulated within resin. At least for this reason Applicants submit that the rejection fails to establish *prima facie* obviousness.

Accordingly, Applicants respectfully request that the rejection be withdrawn.

Rejection under 35 U.S.C. §103 - Nishino, Hirano, and Andrews

Claims 6, 9, and 20 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Nishino, Hirano, and Andrews (U.S. Patent 5,422,905). Applicants respectfully traverse this rejection.

Similar to claim 1, claim 6 has been amended to recite "a semiconductor laser chip encapsulated within resin." As stated above, Applicants submit that Nishino fails to teach or suggest a semiconductor laser chip encapsulated within resin. At least for this reason, Applicants submit that the rejection fails to establish *prima facie* obviousness.

Accordingly, Applicants respectfully request that the rejection be withdrawn.

Rejection under 35 U.S.C. §103 - Nishino, Hirano, and Okuda

Claims 10 and 11 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Nishino, Hirano, and Okuda (U.S. Patent 6,049,423). Applicants respectfully traverse this rejection.

At least for the same reasons as above for claim 1, Applicants submit that *prima facie* obviousness has not been established for claims 10 and 11.

The present invention has an objective to improve the reliability of a semiconductor laser device. One feature that serves this objective is to completely cover, i.e., encapsulate, the semiconductor laser chip within a resin (see Specification, page 37, first full paragraph). Claim 1, as amended, recites "wherein the semiconductor laser chip is encapsulated within the resin." As stated above Nishino and Hirano fail to teach or suggest this claimed feature. Okuda does not make up for this deficiency, as it does not teach a semiconductor laser device. Accordingly, Applicants submit that the rejection fails to establish *prima facie* obviousness.

Applicants respectfully request that the rejection be withdrawn.

Remaining Rejections under 35 U.S.C. §103

Claims 12 and 13 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Nishino and Hirano, in view of Andrews, Brooks et al., or Missaggia. Claim 14 has been rejected under 35 U.S.C. §103(a) as being unpatentable over Nishino, Hirano and Claisse, and further in view of Hazell et al. Claims 15 and 17 have been rejected under 35 U.S.C. §103(a) as being unpatentable over either Nishino, Hirano and Andrews, and further in view of Sarraf. Claims 16, 18 and 19 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Nishino, Hirano and Chaisse, as applied to claim 4, and further in view of Kudo et al. At least for the reasons above for claim 1, Applicants submit that the rejections under 35 U.S.C. §103(a) fail to establish *prima facie* obviousness. In addition, each of the above listed claims are directed toward configurations that provide improved reliability in the context of a semiconductor laser device emitting a diffused laser beam that meets safety standards for a person's eyes. None of the above-cited references address this problem. Thus, at least for this additional reason, Applicants submit that the present invention addresses a problem with non-obvious solutions, and respectfully request that the rejections be withdrawn.

Conclusion

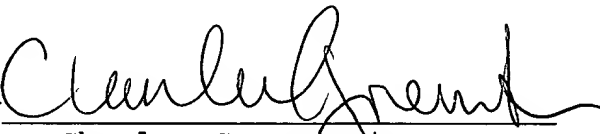
All of the stated grounds of objection and rejection have been properly traversed, accommodated, or rendered moot. It is believed that a full and complete response has been made to the outstanding Office Action, and that the present application is in condition for allowance.

Should any issues remain, however, the Examiner is invited to telephone Robert W. Downs (Reg. No. 48,222) at (703) 205-8000 in an effort to expedite prosecution.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§1.16 or 1.17, particularly extension of time fees.

Respectfully submitted,

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